

LISTING OF CLAIMS:

1. (Previously Presented) A road vehicle display device comprising:
a display section configured and arranged to be fixedly coupled to a road vehicle to display an image within a display region of a non-head mounted display screen to a viewer inside the road vehicle;
a motion detecting section configured and arranged to compute a movement of the display section by determining movement of the road vehicle in which the road vehicle display device is used;
an image displacement computing section configured to compute a translational displacement of the display section based on the movement of the display section;
a viewer motion determining section configured and arranged to determine a viewer motion value that is indicative of a movement of a head portion of a viewer watching the display section;
a relative displacement computing section configured to compute a relative displacement between the display section and the head portion of the viewer based on the translational displacement of the display section computed by the image displacement computing section and the viewer motion value of the head portion of the viewer determined by the viewer motion determining section; and
a display control section configured to shift a display position of the image within the display region of the display screen by an amount based on the relative displacement to stabilize the image within the display section to the viewer.

2-4. (Canceled)

5. (Previously Presented) The road vehicle display device as recited in claim 1, further comprising
a head motion detecting section configured and arranged to detect the movement of the head portion of the viewer,

the viewer motion determining section being further configured and arranged to determine the viewer motion value based on a detection result from the head motion detecting section.

6. (Previously Presented) The road vehicle display device as recited in claim 1, wherein

the viewer determining section is further configured and arranged to determine the viewer motion value based on at least one of a response function of vibration of a human body corresponding to the viewer in response to the movement of the vehicle and a numerical model indicative of the vibration of the human body in response to the movement of the vehicle.

7. (Previously Presented) The road vehicle display device as recited in claim 6, wherein

the viewer motion determining section is further configured and arranged to determine the viewer motion value using at least one of weight of the viewer, height of the viewer, mass of the viewer, shape of the viewer and a sitting posture of the viewer as an estimate parameter.

8. (Previously Presented) The road vehicle display device as recited in claim 6, wherein

the viewer motion determining section is further configured and arranged to select the response function of the vibration of the human body corresponding to at least one of weight of the viewer, height of the viewer, mass of the viewer, shape of the viewer and a sitting posture of the viewer estimated based on a distribution of a body pressure on a seat on which the viewer is sitting.

9. (Previously Presented) A display device comprising:
a display section configured and arranged to display an image within a display region of a non-head mounted display screen, the display section being configured and arranged to be fixedly coupled to a vehicle to display the image to a passenger inside the vehicle;

a motion detecting section configured and arranged to detect a movement of the display section by detecting a movement of the vehicle;

an image displacement computing section configured to compute a translational displacement of the display section based on the movement of the display section;

a center deviation computing section configured and arranged to compute a center deviation between a center of the image and a center of the display region of the display section based on a translated position of the display section; and

a display control section configured to adjust a display position of the image within the display region of the display section based simultaneously on the translational displacement of the display section and the center deviation.

10. (Original) The display device as recited in claim 9, wherein the center deviation computing section is further configured and arranged to set the center of the image using an average position of centers of a plurality of images consecutively displayed in the display section within a prescribed period of time and repeat computing the center deviation not faster than once every three seconds.

11. (Previously Presented) A road vehicle display device comprising:
a display section configured and arranged to display an image within a display region of a non-head mounted display screen, the display section being configured and arranged to be fixedly coupled to a road vehicle to display the image to a viewer inside the road vehicle;
a motion detecting section configured and arranged to detect a movement of the display section by detecting a movement of the road vehicle in which the road vehicle display device is equipped;
an image displacement computing section configured to compute a translational displacement of the display section based on the movement of the display section;
an acceleration/deceleration operation determining section configured and arranged to determine whether the vehicle is accelerating or decelerating;
a center deviation computing section configured and arranged to compute a center deviation between a center of the image and a center of the display region of the display section, the center deviation computing section being further configured and arranged to stop

computing the center deviation upon determining that the vehicle is accelerating or decelerating; and

a display control section configured to adjust a display position of the image within the display region of the display section based on the translational displacement of the display section and the center deviation, with the display control section being configured to stop using a center deviation that is computed during periods of acceleration and deceleration of the road vehicle.

12. (Original) The display device as recited in claim 11, wherein the acceleration/deceleration operation determining section is further configured and arranged to determine whether the vehicle is accelerating or decelerating by detecting at least one of an accelerator pedal operation, a steering operation and a vehicle motion.

13. (Original) The display device as recited in claim 10, wherein an acceleration/deceleration operation determining section configured and arranged to determine whether the vehicle is accelerating or decelerating, the center deviation computing section being further configured and arranged to stop computing the center deviation when it is determined that the vehicle is accelerating or decelerating.

14. (Original) The display device as recited in claim 13, wherein the acceleration/deceleration operation determining section is further configured and arranged to determine whether the vehicle is accelerating or decelerating by detecting at least one of an accelerator pedal operation, a steering operation and a vehicle motion.

15. (Previously Presented) A display device comprising:
a display section configured and arranged to display an image within a display region of a non-head mounted display screen the display section being configured and arranged to be fixedly coupled to a vehicle to display the image to a passenger inside the vehicle;
a motion detecting section configured and arranged to detect a movement of the display section by detecting a movement of the vehicle;

an image displacement computing section configured to compute a translational displacement of the display section based on the movement of the display section;

a display control section configured to adjust a display position of the image within the display region of the display section based at least on the translational displacement of the display section; and

an acceleration/deceleration operation determining section configured and arranged to determine whether the vehicle is accelerating or decelerating,

the image displacement computing section being further configured to compute the translational displacement divided into a low frequency displacement which is not detectable by the passenger when the vehicle travels at a constant speed and a high frequency displacement which is detectable by the passenger when the vehicle travels at a constant speed,

the display control section being further configured to adjust the display position of the image within the display region of the display section based on the low frequency displacement and the high frequency displacement when the vehicle is accelerating or decelerating and based on the high frequency displacement when the vehicle is not accelerating or decelerating.

16. (Previously Presented) The display device as recited in claim 15, further comprising

a center deviation computing section configured and arranged to compute a center deviation between a center of the image and a center of a display region of the display section,

the display control section being further configured and arranged to shift the image on the display section based on the center deviation.

17. (Original) The display device as recited in claim 1, wherein the display section, the motion detecting section, the image displacement computing section and display control section are configured and arranged to be part of a portable, hand held device.

18. (Previously Presented) A display device comprising:
a display section configured and arranged to display an image within a display region of a non-head mounted display screen;
a motion detecting section configured and arranged to detect a movement of the display section;
an image displacement computing section configured to compute a translational displacement of the display section based on the movement of the display section;
a viewer motion determining section configured and arranged to determine a viewer motion value that is indicative of a movement of a head portion of a viewer watching the display section;
a relative displacement computing section configured to compute a relative displacement between the display section and the head portion of the viewer based on the translational displacement of the display section computed by the image displacement computing section and the viewer motion value of the head portion of the viewer determined by the viewer motion determining section; and
a display control section configured to adjust a display position of the image within the display region of the display section based on the relative displacement, the display control section being further configured to shift the image by an amount based on the relative displacement to stabilize the image to the viewer, the display section, the motion detecting section, the image displacement computing section and display control section being configured and arranged to be part of a portable, hand held device.

19. (Previously Presented) A display device comprising:
means for displaying an image within a display region;
means for detecting a movement of the display means;
means for computing a translational displacement of the display means based on the movement of the display means;
means for determining a viewer motion value that is indicative of a movement of a head portion of a viewer watching the display section;
means for computing a relative displacement between the display section and the head portion of the viewer based on the translational displacement of the display section computed

by the image displacement computing means and the viewer motion value of the head portion of the viewer determined by the viewer motion determining means; and

means for adjusting a display position of the image within the display region of the display means based on the relative displacement.

20. (Previously Presented) A method comprising:
displaying an image within a display region of a road vehicle display device disposed within a road vehicle to a viewer inside the road vehicle;
determining a movement of the display device by determining movement of the road vehicle in which the road vehicle display device is used;
computing a translational displacement of the display device based on the movement of the display device;
determining a viewer motion value that is indicative of a movement of a head portion of a viewer watching the display section;
computing a relative displacement between the display section and the head portion of the viewer based on the translational displacement of the display section and the viewer motion value of the head portion of the viewer; and
shifting a display position of the image within the display region of the display device by an amount based on the relative displacement to stabilize the image within the display section to the viewer.